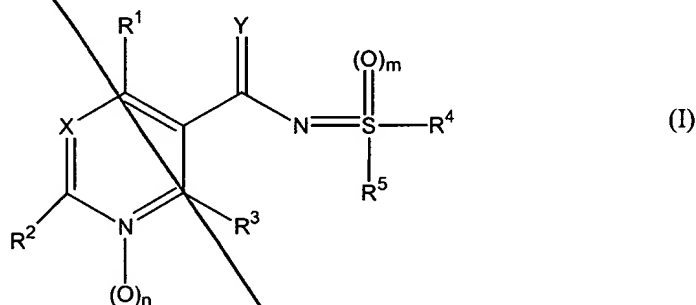


In the Claims:

Cancel all the claims, without prejudice or the intention of creating estoppel and substitute.

--25. An acylsulfimide of the formula (I) or a salt thereof,



where the symbols and indices are as defined below:

X is CH;

Y is O or S;

n is 0 or 1;

m is 0 or 1;

R¹ is C₁-C₆-haloalkyl;

R² and R³ are identical or different and are H, halogen or a branched or unbranched (C₁-C₆)-alkyl group, where one or two CH₂ groups may be replaced by -O- or -S- or -N(C₁-C₆)-alkyl, with the proviso that heteroatoms may not be adjacent to one another;

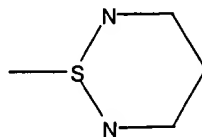
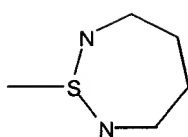
R⁴ and R⁵ are identical or different and are R⁶, -C(=W)R⁷, -C(=NOR⁷)R⁷, -C(=NNR⁷)R⁷, -C(=W)OR⁷, -C(=W)NR⁷₂, -OC(=W)R⁷, -OC(=W)OR⁷, -NR⁷C(=W)R⁷, -N[C(=W)R⁷]₂, -NR⁷C(=W)OR⁷, -C(=W)NR⁷NR⁷₂,

~~-C(=W)NR⁷-NR⁷[C(=W)R⁷], -NR⁷-C(=W)NR⁷₂, -NR⁷-NR⁷C(=W)R⁷,
-NR⁷-N[C(=W)R⁷]₂, -N[(C=W)R⁷]-NR⁷₂, -NR⁷-NR⁷[(C=W)WR⁷],
-NR⁷[(C=W)NR⁷]₂, -NR⁷(C=NR⁷)R⁷, -NR⁷(C=NR⁷)NR⁷₂, -O-NR⁷₂,
-O-NR⁷(C=W)R⁷, -SO₂NR⁷₂, -NR⁷SO₂R⁷, -SO₂OR⁷, -OSO₂R⁷, -OR⁶
-NR⁷₂, -SR⁷₂-SiR⁷₃, -PR⁷₂, -P(=W)R⁷, -SO₂R, -SO₂R⁷, -PW₂R⁷₂, -PW₃R⁷₂;~~

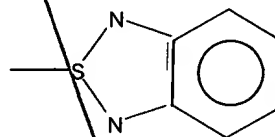
or

R⁴ and R⁵

~~together with the sulfur atom form a saturated or unsaturated ring system having 3 to 8 carbon atoms, which is optionally mono-or polysubstituted by R⁹, wherein one of the carbon atoms is optionally replaced by a heteroatom selected from the group consisting of O, S, SO, SO₂ and N-R^a and wherein said ring is optionally condensed with one or two optionally substituted phenyl radicals or an optionally substituted 5-or 6-membered saturated ring or is an optionally substituted ring system selected from the group consisting of:~~



and



wherein said optionally substituent(s) is R^9 ;

wherein:

R^9 are identical or different and are R^{10} , R^{11} , $-C(W)R^{10}$,
 $-C=N(OR^{10})R^{10}$, $-C(=NNR^{10}_2)R^{10}$, $-C(=W)R^{10}$, $-C(=W)NR^{10}_2$,
 $-OC(=W)R^{10}$, $-OC(=W)OR^{10}$, $-NR^{10}C(-W)R^{10}$, $-N[C(=W)R^{10}_2]$, $-NR^{10}C(-W)OR^{10}$, $-C(=W)NR^{10}-NR^{10}_2$, $-(=W)NR^{10}-NR^{10}$, $-[C(=W)R^{10}]$, $-NR^{10}-C(=W)-NR^{10}_2$, $-NR^{10}-NR^{10}C(=W)R^{10}$, $-NR^{10}-N[(C=W)R^{10}]_2$,
 $-N[(C=W)R^{10}]-NR^{10}_2$, $-NR^{10}-N[(C=W)WR^{10}]$, $-NR^{10}[(C=W)-NR^{10}_2]$,
 $-NR^{10}(C=NR^{10})R^{10}$, $-NR^{10}(C=NR^{10})NR^{10}_2$, $-O-NR^{10}_2$, $-O-NR^{10}(C=W)R^{10}$,
 $-SO_2-NR^{10}_2$, $-NR^{10}SO_2R^{10}$, SO_2OR^{10} , $-OSO_2R^{10}$, $-OR^{10}$, $-NR^{10}_2$, $-SR^{10}$,
 $-SiR^{10}_3$, $-PR^{10}_2$, $-P(=W)R^{10}_2$, $-SOR^{10}$, $-SO_2R^{10}$, $-PW_2R^{10}_2$, $-PW_3R^{10}_2$; or
 two radicals R^9 together form $(=W)$, $(=NR^{10})$, $(=CR^{10}_2)$, $(=CHR^{10})$ or
 $(=CH_2)$;

R^{10} are identical or different and are (C_1-C_6) -alkyl, (C_2-C_6) -alkenyl,
 (C_2-C_6) -alkynyl, (C_3-C_8) -cycloalkyl, (C_4-C_8) -cycloalkenyl, (C_3-C_8) -cycloalkyl- (C_1-C_4) -alkyl, (C_4-C_8) -cycloalkenyl- (C_1-C_4) -alkyl,
 (C_3-C_8) -cycloalkyl- (C_2-C_4) -alkenyl- (C_4-C_8) -cycloalkenyl- (C_2-C_4) -alkenyl,
 (C_1-C_6) -alkyl- (C_3-C_8) -cycloalkyl, (C_2-C_6) -alkenyl- (C_3-C_8) -cycloalkyl,
 (C_2-C_6) -alkynyl- (C_3-C_8) -cycloalkyl, (C_1-C_6) -alkyl- (C_4-C_8) -cycloalkenyl,
 (C_2-C_6) -alkenyl- (C_4-C_8) -cycloalkenyl, aryl, heterocyclyl;

where the radicals mentioned are optionally substituted by one or more radicals R¹¹; and

R¹¹ are identical or different and are halogen, cyano, nitro, hydroxyl, thio, amino, formyl, (C₁-C₆)-alkanoyl, (C₁-C₆)-alkoxy, (C₃-C₆)-alkenyloxy, (C₃-C₆)-alkynyloxy, (C₁-C₆)-haloalkyloxy, (C₃-C₆)-haloalkenyloxy, (C₃-C₆)-haloalkynyloxy, (C₃-C₈)-cycloalkoxy, (C₄-C₈)-cycloalkenyloxy, (C₃-C₈)-halocycloalkoxy, (C₄-C₈)-halocycloalkenyloxy, (C₃-C₈)-cycloalkyl-(C₁-C₄)-alkoxy, (C₄-C₈)-cycloalkenyl-(C₁-C₄)-alkoxy, (C₃-C₈)-cycloalkyl-(C₂-C₄)-alkenyloxy, (C₄-C₈)-cycloalkenyl-(C₁-C₄)-alkenyloxy, (C₁-C₆)-alkyl-(C₃-C₈)-cycloalkoxy, (C₂-C₆)-alkenyl-(C₃-C₈)-cycloalkoxy, (C₂-C₆)-alkynyl-(C₃-C₈)-cycloalkoxy, (C₁-C₆)-alkyl-(C₄-C₈)-cycloalkenyloxy, (C₂-C₆)-alkenyl-(C₄-C₈)-cycloalkenyloxy, (C₁-C₄)-alkoxy-(C₁-C₆)-alkoxy, (C₁-C₄)-alkoxy-(C₃-C₆)-alkenyloxy, carbamoyl, (C₁-C₆)-mono-or dialkylcarbamoyl, (C₁-C₆)-mono-or dihaloalkylcarbamoyl, (C₃-C₈)-mono-or dicycloalkylcarbamoyl, (C₁-C₆)-alkoxycarbonyl, (C₃-C₈)-cycloalkoxycarbonyl, (C₁-C₆)-alkanoyloxy, (C₃-C₈)-cycloalkanoyloxy, (C₁-C₆)-haloalkoxycarbonyl, (C₁-C₆)-haloalkanoyloxy, (C₁-C₆)-alkanamido, (C₁-C₆)-haloalkanamido, (C₂-C₆)-alkenamido, (C₃-C₈)-cycloalkanamido, (C₃-C₈)-cycloalkyl-(C₁-C₄)-alkanamido, (C₁-C₆)-alkylthio, (C₃-C₆)-alkenylthio, (C₃-C₆)-alkynylthio, (C₁-C₆)-haloalkylthio, (C₃-C₆)-haloalkenylthio, (C₃-C₆)-haloalkynylthio, (C₃-C₈)-cycloalkylthio, (C₄-C₈)-cycloalkenylthio, (C₃-C₈)-

halocycloalkylthio, (C₄-C₈)-halocycloalkenylthio, (C₃-C₈)-
cycloalkyl-(C₁-C₄)-alkylthio, (C₄-C₈)-cycloalkenyl-(C₁-C₄)-
alkylthio, (C₃-C₈)-cycloalkyl-(C₃-C₄)-alkenylthio, (C₄-C₈)-
cycloalkenyl-(C₃-C₄)-alkenylthio, (C₁-C₆)-alkyl-(C₃-C₈)-
cycloalkylthio, (C₂-C₆)-alkenyl-(C₃-C₈)-cycloalkylthio, (C₂-C₆)-
alkynyl-(C₃-C₈)-cycloalkylthio, (C₁-C₆)-alkyl-(C₄-C₈)-
cycloalkenylthio, (C₂-C₆)-alkenyl-(C₄-C₈)-cycloalkenylthio, (C₁-
C₆)-alkylsulfinyl, (C₃-C₆)-alkenylsulfinyl, (C₃-C₆)-
alkynylsulfinyl, (C₁-C₆)-haloalkylsulfinyl, (C₃-C₆)-
haloalkenylsulfinyl, (C₃-C₆)-haloalkynylsulfinyl, (C₃-C₈)-
cycloalkylsulfinyl, (C₄-C₈)-cycloalkenylsulfinyl, (C₃-C₈)-
halocycloalkylsulfinyl, (C₄-C₈)-halocycloalkenylsulfinyl, (C₃-C₈)-
cycloalkyl-(C₁-C₄)-alkylsulfinyl, (C₄-C₈)-cycloalkenyl-(C₁-C₄)-
alkylsulfinyl, (C₃-C₈)-cycloalkyl-(C₃-C₄)-alkynylsulfinyl, (C₄-C₈)-
cycloalkenyl-(C₃-C₄)-alkenylsulfinyl, (C₁-C₆)-alkyl-(C₃-C₈)-
cycloalkylsulfinyl, (C₂-C₆)-alkenyl-(C₃-C₈)-cycloalkylsulfinyl,
(C₂-C₆)-alkynyl-(C₃-C₈)-cycloalkylsulfinyl, (C₁-C₆)-alkyl-(C₄-C₈)-
cycloalkenylsulfinyl, (C₂-C₆)-alkenyl-(C₄-C₈)-
cycloalkenylsulfinyl, (C₁-C₆)-alkylsulfonyl, (C₃-C₆)-
alkenylsulfonyl, (C₃-C₆)-alkynylsulfonyl, (C₁-C₆)-
haloalkylsulfonyl, (C₃-C₆)-haloalkenylsulfonyl, (C₃-C₆)-haloalky-
nylsulfonyl, (C₃-C₈)-cycloalkylsulfonyl, (C₄-C₈)-
cycloalkenylsulfonyl, (C₃-C₈)-halocycloalkylsulfonyl, (C₄-C₈)-

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halocycloalkenylsulfonyl, (C₃-C₈)-cycloalkyl-(C₁-C₄)-
alkylsulfonyl, (C₄-C₈)-cycloalkenyl-(C₁-C₄)-alkylsulfonyl, (C₃-C₈)-
cycloalkyl-(C₃-C₄))-alkenylsulfonyl, (C₄-C₈)-cycloalkenyl-(C₃-
C₄))-alkenylsulfonyl, (C₁-C₆)-alkyl-(C₃-C₈)-cycloalkylsulfonyl,
(C₂-C₆)-alkenyl-(C₃-C₈)-cycloalkylsulfonyl, (C₂-C₆)-alkynyl-(C₃-
C₈)-cycloalkylsulfonyl, (C₁-C₆)-alkyl-(C₄-C₈)-
cycloalkenylsulfonyl, (C₂-C₆)-alkenyl-(C₄-C₈)-
cycloalkenylsulfonyl, (C₁-C₆)-dialkylamino, (C₁-C₆)-alkylamino,
(C₃-C₆)-alkenylamino, (C₃-C₆)-alkynylamino, (C₁-C₆)-
haloalkylamino, (C₃-C₆)-haloalkenylamino, (C₃-C₆)-
haloalkynylamino, (C₃-C₈)-cycloalkylamino, (C₄-C₈)-
cycloalkenylamino, (C₃-C₈)-halocycloalkylamino, (C₄-C₈)-
halocycloalkenylamino, (C₃-C₈)-cycloalkyl-(C₁-C₄)-alkylamino,
(C₄-C₈)-cycloalkenyl-(C₁-C₄)-alkylamino, (C₃-C₈)-cycloalkyl-(C₃-
C₄))-alkenylamino, (C₄-C₈)-cycloalkenyl-(C₃-C₄)-alkenylamino,
(C₁-C₆)-alkyl-(C₃-C₈)-cycloalkylamino, (C₂-C₆)-alkenyl-(C₃-C₈)-
cycloalkylamino, (C₂-C₆)-alkynyl-(C₃-C₈)-cycloalkylamino, (C₁-
C₆)-alkyl-(C₄-C₈)-cycloalkenylamino, (C₂-C₆)-alkenyl-(C₄-C₈)-
cycloalkenylamino, (C₁-C₆)-trialkylsilyl, aryl, aryloxy, arylthio,
arylamino, aryl-(C₁-C₄)-alkoxy, aryl-(C₃-C₄)-alkenyloxy, aryl-(C₁-
C₄)-alkylthio, aryl-(C₂-C₄)-alkenylthio, aryl-(C₁-C₄)-alkylamino,
aryl-(C₃-C₄)-alkenylamino, aryl-(C₁-C₆)-dialkylsilyl, diaryl-(C₁-
C₆)-alkylsilyl, triarylsilyl and 5-or 6-membered heterocyclyl, the

cyclic moiety of the fourteen last-mentioned radicals are optionally substituted by one or more radicals selected from the group consisting of halogen, cyano, nitro, amino, hydroxyl, thio, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₃-C₈)-cycloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy, (C₁-C₄)-alkylthio, (C₁-C₄)-haloalkylthio, (C₁-C₄)-alkylamino, (C₁-C₄)-haloalkylamino, formyl and (C₁-C₄)-alkanoyl; R^a is H, (C₁-C₄)-alkyl, branched or unbranched, (C₁-C₄)-alkanoyl, (C₁-C₄)-alkoxycarbonyl, (C₁-C₄)-alkyl- or -dialkylaminocarbonyl or (C₁-C₄)-alkylsulfonyl;

W is O or S;

R⁶ are identical or different and are (C₁-C₂₀)-alkyl, (C₂-C₂₀)-alkenyl, (C₂-C₂₀)-alkynyl, (C₃-C₈)-cycloalkyl, (C₄-C₈)-cycloalkenyl, (C₈-C₁₀)-cycloalkynyl, aryl or heterocyclyl, where the radicals mentioned may optionally be mono- or polysubstituted, and

R⁷ is H or R⁶

wherein:

heterocycle is a saturated, partially saturated or aromatic ring having 3 to 6 carbon atoms in which one of the carbon atoms is selected from the group consisting of O, S and N or is a heterocyclic ring selected from the group consisting of thiazole, oxazole, imidazole, isothiazole, isoxazole, pyrazole, 1,3,4-oxadiazole, 1,3,4-thiadiazole, 1,3,4-triazole, 1,2,4-oxadiazole, 1,2,4-thiadiazole, 1,2,4-triazole, 1,2,3-triazole, 1,2,3,4-tetrazole, benzo[b]thiophene,

benzo[b]furan, indole, benzo[c]thiophene, benzo[c]furan, isoin-
dole, benzoxazole, benzothiazole, benzimidazole, benzisoxazole,
benzisothiazole, benzopyazole; benzothiadiazoole, benzotriazole,
dibenzofuran, dibenzothiophene, carbazole, pyrazine, pyrimidine,
pyridazine, 1,3,5-triazine, 1,2,4-triazine, 1,2,4,5-tetrazine, quin-
oline, isoquinoline, quinoxaline, quinazoline, cinnoline, 1,8-
naphthyridine, 1,5-naphthyridine, 1,6-naphthyridine, 1,7-
naphthyridine, phthalazine, pyridopyrimidine, purine, pteridine,
4H-quinolizine, piperidine, pyrrolidine, oxazoline, isoxazolidine or
thiazolidine; and

the substituents, unless otherwise defined, are halogen, nitro,
cyano, di-(C₁-C₄)-alkylamino, (C₁-C₄)-alkyl, (C₁-C₄)-trialkylsilyl,
(C₁-C₄)-alkoxy, (C₁-C₄)-alkoxy-(C₁-C₄)-alkyl, (C₁-C₂)-alkoxy-
[CH₂CH₂]_{1,2}-ethoxy, (C₁-C₄)-alkylthio, (C₁-C₄)-alkylsulfinyl, (C₁-
C₄)-alkylsulfonyl, phenyl, benzyl, phenoxy, phenylthio, halophe-
noxy, (C₁-C₄)-alkylphenoxy, (C₁-C₄)-alkoxyphenoxy, (C₁-C₄)-
alkylthiophenoxy, phenylthio, heterocyclyl, heterocyclylthio, het-
erocyclyloxy, haloheterocyclyloxy, alkylheterocyclyloxy or alk-
oxyheterocyclyloxy, wherein the alkyl radicals and the radicals de-
rived therefrom one or more --and in the case of fluorine up to a
maximum number of --hydrogen atom is optionally replaced by
halogen.

26. The acylsulfimide as claimed in claim 25, wherein Y is oxygen.

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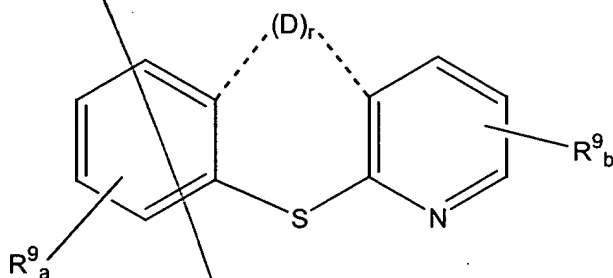
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27. The acylsulfimide as claimed in claim 25, wherein N is O.

28. The acylsulfimide as claimed in claim 25, wherein R¹ is a (C₁-C₆)-alkyl which is substituted by F and/or Cl.

29. The acylsulfimide as claimed in claim 25, where the unit SR⁴R⁵ is a structure selected from the group consisting of

A.



wherein the symbols and indices have the following meanings:

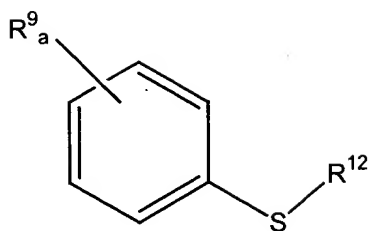
r is 0, 1;

D is a direct bond, (C₁-C₄)-alkylene, branched or unbranched, O, S(O)_{0,1,2}, or NR^a;

R^a is H, (C₁-C₄)-alkyl, branched or unbranched, (C₁-C₄)-alkanoyl, (C₁-C₄)-alkoxycarbonyl, (C₁-C₄)-alkyl- or -dialkylaminocarbonyl or (C₁-C₄)-alkylsulfonyl;

a and b are independently 0, 1, 2, 3 or 4

B.



wherein the symbols and indices have the following meanings:

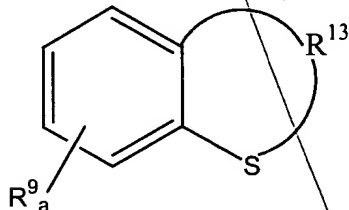
R^{12}

is (C₁-C₈)-alkyl, optionally substituted by an optionally substituted phenyl radical or (C₃-C₆)-cycloalkyl radical, (C₃-C₆)-cycloalkyl, optionally substituted by or condensed with an optionally substituted phenyl radical;

a

is 0, 1, 2, 3, 4, or 5;

C.



wherein the symbols and indices have the following meanings:

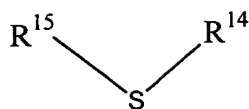
a

is 0, 1, 2, 3 or 4;

R^{13}

is a straight chain or branched (C₂-C₈)-alkanediyl group, optionally substituted by one or two or condensed with an optionally substituted phenyl radical;

D.

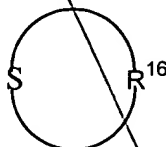


wherein the symbols and indices have the following meanings:

R^{14} and R^{15} are identical or different and are in each case (C₁-C₈)-alkyl, optionally substituted by or condensed with an optionally substituted phenyl radical or (C₃-C₈)-cycloalkyl radical, (C₃-C₆)-cycloalkyl, optionally substituted by or condensed with an optionally substituted phenyl radical;

and

E.



wherein the symbol has the following meaning:

R^{16} is a straight chain or branched (C₂-C₆)-alkanediyl group, optionally substituted by one or two or condensed with an optionally substituted phenyl radical.

30. A method for controlling arthropods which comprises applying an effective amount of a compound as claimed in claim 25 to a site where said arthropods reside.

31. The method according to claim 30, where the arthropod is an insect or acarid.

32. The method according to claim 30, wherein the site is a plant seed.